Serum Adenosine Deaminase Activity with Mycoplasma pneumoniae

To the Editor:

Adenosine deaminase (ADA) is a predominant T-lymphocyte enzyme, and its plasma activity is high in diseases where cellular immunity is stimulated. Acute pneumonia due to Mycoplasma pneumoniae may be related to T-lymphocytes activity, and is different from bacterial pneumonia in its inflammatory process. It is sometimes difficult to clinically diagnose mycoplasma pneumonia in the early stage, before the rise of antibody titer to Mycoplasma pneumoniae. β-lactam group antibiotic therapy, which is most commonly used in pneumonia, is not effective on mycoplasma pneumonia. If mycoplasma pneumonia is diagnosed in the early stage, antibiotic therapy could be more effective with erythromycin or tetracycline.

In this study, we have investigated 32 cases with pneumonia (12 cases of mycoplasma pneumonia and 20 cases of bacterial pneumonia) to see the usefulness of ADA measurement in the diagnosis of mycoplasma pneumonia.

Twelve patients with mycoplasma pneumonia were diagnosed by rise of a complement fixing (CF) titer of antibody to Mycoplasma pneumoniae. Twenty patients with non-mycoplasma pneumonia did not show elevation of the CF titer, and were treated with β-lactam group antibiotics effectively. ADA activity was tested within ten days from the first symptoms in all cases. Measurements of ADA activity in sera were done by the method of Giusti.1

Serum ADA activity in the group with mycoplasma pneumonia was 30.2 ± 14.0 U/l (37° C), that of non-mycoplasma pneumonia patients 12.5 ± 3.3, and that of normal control subjects 15.2 ± 4.5 (Fig 1). ADA activity of the group with mycoplasma pneumonia was significantly higher than those with non-mycoplasma pneumonia and normal control subjects (p<0.001).

If the inflammatory process of mycoplasma pneumonia is mainly dependent on T-lymphocyte activities, it seems reasonable that serum ADA activity shows high level in this disease but not in bacterial pneumonia. These results suggest that serum ADA activity in patients with acute pneumonia may be useful for the early diagnosis of pneumonia due to Mycoplasma pneumoniae.

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REFERENCES


Geotrichosis: Who is Susceptible?

To the Editor:

As the number of immunocompromised patients increases, a parallel rise in the number of infections from opportunistic invaders seems likely. Bronchopulmonary geotrichosis is a rare disease caused by Geotrichum candidum, a fungus considered to be endogenous normal bronchial flora. Infection caused by this fungus may be either bronchial or pulmonary. Ordinarily, bronchial infection requires no treatment other than routine therapy, whereas pulmonary invasion—which can be fatal—may require specific treatment.1

Few reports of bronchopulmonary infection with G candidum have been published, and the majority of these were in patients suffering from another debilitating disease.14 Recently, the organism was repeatedly isolated in three patients who were admitted to the Veterans Administration Medical Center (VMAC), Memphis, with acute pulmonary distress. Chest radiographs demonstrated nonspecific pulmonary infiltrates which cleared with routine therapy. All patients had pre-existing pulmonary disease and adenocarcinoma of the lung.

To reevaluate the risk of pulmonary infections in immunocompromised patients, we reviewed cultures of patients admitted to two